CAMERON, S., O'DONOGHUE, P. AND ADLARD, R. : HAS *MACROPODINIUM* (CILIOPHORA:LITOSTOMATEA) COEVOLVED WITH ITS KANGAROO HOSTS?

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ABSTRACT: Members of the genus [Macropodinium] are unique enodsymbionts inhabiting the foregut of Australian macropodid marsupials. In our survey of macropodids for ciliated protozoa we have found 15 putative [Macropodinium] spp. occurring in 10 host species. Ciliates were characterised by silver impregnation and scanning electron microscopy. Species vary in size, vestibulum orientation, pellicular ornamentation, and dorsoventral groove depth. The species found fall into 3 groups: the [M. moiri] group are small, oval species with deep body grooves and anterior vestibula; the [M. yalanbense] group are medium sized, reniform species with shallow body grooves and anterio-ventral vestibula; and the [M.] "complex" group are large, highly ornamented species with deep body grooves and anterio-ventral vestibula. The species groups are associated with particular host groups. The [M.moiri] group members are found only in the primitive genera [Setonix, Thylogale] and [Petrogale], the [M. yalanbense] group are found in the advanced subgenera [Macropus(Macropus)] and [Macropus(Osphranter)] and the [M.] "complex" group ciliates found in the wallaby genera [Wallabia] and [Macropus(Notomacropus)]. Coevolution seems to have occurred at the host genus/subgenus level but it is as yet unknown whether it has occurred at the species level.